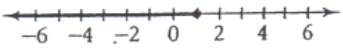
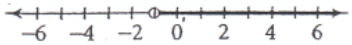
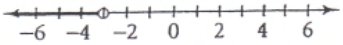
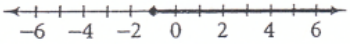
Practice and Apply

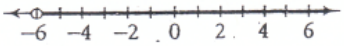
Write an inequality that describes each graph.

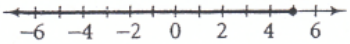
10. 

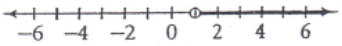
11. 

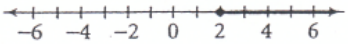
12. 

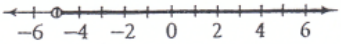
13. 

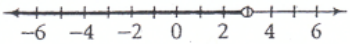
14. 

15. 

16. 

17. 

18. 

19. 

Solve each inequality, and graph the solution on a number line.

20. $5x > 10$ **21.** $35x > 70$ **22.** $-5x > 10$

23. $-35x > 70$ **24.** $-5x > -10$ **25.** $-35x > -70$

26. $s - 2 > 10$ **27.** $y + 5 < -3$ **28.** $3x + 7 < 31$

29. $2x - 3 \geq 19$ **30.** $\frac{1}{2}d - 1 \geq -15$ **31.** $\frac{1}{5}x - 2 \leq 28$

32. $-2x > 14$ **33.** $-5x \leq 30$ **34.** $-x + 8 < 41$

35. $-5x - 15 > 60$ **36.** $-10 < -5x$ **37.** $-81 \leq -9x$

38. $\frac{-x}{3} \geq 10$ **39.** $\frac{-t}{32} < 2$ **40.** $-6(p + 4) < 12$

41. $6 - (4x - 3) \geq 8$ **42.** $4y - 12 > 7y - 15$ **43.** $8a - 11 < 4a + 9$

44. $3(4x - 5) < 8x + 3$ **45.** $6(x - 9) \geq 21 + x$ **46.** $-4x - 3 < -6x - 17$

47. $-x + 5 \geq -4x - 7$ **48.** $2(x - 5) < -4(3x + 2)$ **49.** $-5(3x + 2) \geq 4(x - 1)$

50. Graph each compound inequality on a number line.

a. $x > -4$ *and* $x < 2$ **b.** $x > -4$ *and* $x > 2$

c. $x > -4$ *or* $x < 2$ **d.** $x > -4$ *or* $x > 2$

51. Graph each compound inequality on a number line.

a. $x < -4$ *and* $x < 2$ **b.** $x < -4$ *and* $x > 2$

c. $x < -4$ *or* $x < 2$ **d.** $x < -4$ *or* $x > 2$

Graph the solution of each compound inequality on a number line.

52. $n + 4 < 16$ *and* $n - 3 > 12$ **53.** $y - 2 < 4$ *and* $y + 4 > 7$

54. $s + 7 > 4$ *or* $s - 2 < 2$ **55.** $x + 8 < 5$ *or* $x - 1 > 3$

56. $x + 9 \leq 5$ *and* $4x \geq 12$ **57.** $5y \geq 15$ *and* $y + 8 \geq 2$

58. $c - 8 \leq 2$ *or* $6c \geq -18$ **59.** $x + 9 \leq 5$ *or* $4x \geq 12$

60. $5a + 12 < 2$ *and* $5a - 12 < 3$ **61.** $3t + 5 > 11$ *and* $4t - 1 < 15$

62. $-9x > -81$ *and* $2(x + 6) > -4$ **63.** $-5d < 40$ *and* $4(d - 3) < -8$

64. $20 - 3x \geq 11$ *or* $-4x \leq -20$ **65.** $14 - 3x \leq 2$ *or* $5 - 4x \geq 17$

66. $5 - 2b > -3$ *or* $-3(b - 3) < -6$ **67.** $-6x - 11 < 13$ *or* $3(x + 2) \leq -9$

68. $\frac{1}{2}(x + 9) \leq -3$ *and* $-10 < -5x$ **69.** $\frac{4m}{3} + 5 > 2$ *and* $4 \leq -2(m - 3) - 7$

70. $2x < 7x - 10$ *or* $8x \leq 3x - 15$ **71.** $2x - 7 < 5x + 8$ *or* $\frac{1}{2}(16 - 4x) \geq 0$

72. Solve $-2a \leq 3x + a < 10a$ for x.